

FoodNet News

FoodNet Vision Meeting

FoodNet held its annual Vision Meeting in Atlanta, Georgia on March 1, 2 and 3, 2000. The purpose of the meeting was to reflect upon achievements from 1999 and plan future FoodNet projects. The Vision Meeting brought together all of the FoodNet partners to share their local experiences and bring new ideas to the table. FoodNet coordinators agreed on the top four priorities for 2001: 1) Improving outbreak investigation and reporting, 2) Writing and disseminating information, 3) Initiating an infant case-control study, 4) Initiating a restaurant case-control study.

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The Emerging Infections Programs (EIPs) conduct population-based surveillance and research to address important issues in infectious diseases and public health. These programs involve partnerships among state health departments, academic centers, and CDC. The Foodborne Diseases Active Surveillance Network (FoodNet) is the primary foodborne disease component of the EIPs.

International Conference on Emerging Infectious Diseases (ICEID), 2000

Many FoodNet team members will present abstracts at the upcoming International Conference on Emerging Infectious Diseases (July 16 - 19, 2000, Atlanta, Georgia). These reports describe FoodNet surveillance data, special FoodNet projects, and FoodNet survey results. Please see our website (<http://www.cdc.gov/ncidod/dbmd/foodnet>) for a complete list of the accepted abstracts and authors.

FoodNet Data in Action

FoodNet data provided the basis for two recent key publications that will be pivotal for future research. An article in Emerging Infectious Diseases by Paul Mead and colleagues titled "Food-Related Illness and Death in the United States" describes the rate of foodborne illness in the United States and hospitalization rates and deaths due to foodborne illness (EID, Vol. 5, No. 5, Sept. - Oct. 1999, <http://www.cdc.gov/ncidod/eid/vol5no5/mead.htm>). Dr. Mead estimates that foodborne diseases cause approximately 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths each year. These new estimations indicate that contaminated food is responsible for more acute illnesses and fewer deaths than previously estimated. Dr. Mead is a medical epidemiologist at the Centers for Disease Control and Prevention.

A second article by Paul Frenzen and colleagues estimates the economic costs of *Salmonella* in the United States. The investigators from the Economic Research Service (ERS) of the U.S. Department of Agriculture collaborated with FoodNet on "Salmonella Cost Estimate Updated Using FoodNet Data," (*Food Review*, Volume 22, Issue 2, <http://www.econ.ag.gov/epubs/pdf/foodrevw/may99/contents.htm#three>) which estimates the annual economic costs of salmonellosis based on the number of illnesses, the associated medical costs, and the time lost from work due to illness. The analysis used FoodNet active surveillance numbers, estimates from the population and laboratory surveys, and a "labor market" approach for valuing premature deaths due to illness. ERS estimates that the annual cost of salmonellosis was \$2.3 billion. Dr. Frenzen is an economist with ERS.



FoodNet 1999 Preliminary Surveillance Report

The 1999 preliminary FoodNet report describes the incidence of foodborne illness in FoodNet sites in the United States. See the March 17 MMWR (Vol. 49, No. 10) online at <http://www.cdc.gov/epo/mmwr/preview/mmwrhtml/mm4910a1.htm>.

The following are key findings of FoodNet surveillance activities during 1999:

- Since 1997, there has been a 19% overall decline in incidence of the bacterial foodborne infections. Although these declines might reflect simple annual fluctuations in foodborne illness, they were concurrent with several interventions, including implementation of mandated changes in meat and poultry processing plants, increased attention to "good agricultural practices" on farms, and increased consumer awareness. Much of this work has been supported by the President's Food Safety Initiative.
- Campylobacter* infections continued to decline in 1999, decreasing in incidence 19% from 1998. Since poultry is the most common source of *Campylobacter* infections, this decline is likely related to changes in poultry processing plants instituted by industry and encouraged by the Pathogen Reduction and Hazard Analysis and Critical Control Points rule of the United States Department of Agriculture. These changes may be leading to less *Campylobacter* contamination of poultry.
- Shigella* incidence demonstrated a 44% decline from 1998 to 1999. This decline follows a large outbreak of shigellosis in 1998 traced to imported parsley, which focused attention on the problems of produce-associated shigellosis and the need for improving basic sanitation on produce farms throughout the continent. This outbreak highlighted the global nature of foodborne illness. The response to the 1998 outbreak suggests that international collaboration may lead to effective interventions.

- The rate of *Salmonella* infections increased in 1999. Infections due to the most common serotype, Typhimurium, remained constant, and those due to the second most common serotype, Enteritidis, declined. The continued decline of *Salmonella* Enteritidis, an egg-associated serotype, occurred in the setting of increased farm-to-table control measures. Increases in other *Salmonella* serotypes may be related to large outbreaks associated with unpasteurized orange juice, raw sprouts, and mangoes.
- The rate of *E. coli* O157 infections decreased in 1999 to a 4-year FoodNet low. This decline occurred in the setting of improved sanitation and hygiene in slaughter and processing plants and attention to hamburger cooking temperature.
- FoodNet completed a case-control study of *Campylobacter* infections in 1999. Ongoing analysis of the data indicates that travel and eating undercooked poultry are risk factors for the infection.
- In FoodNet sites, *Listeria* infections were associated with the highest hospitalization rate and caused nearly half of the reported deaths. FoodNet will begin a case-control study of *Listeria* infections in 2000 to identify food sources and potential control points.

FoodNet Activities: New for 2000

Population Survey

The third cycle of the FoodNet population survey, being conducted in eight FoodNet sites, began in February 2000 and will run for 12 months. The purpose of the survey is to estimate more precisely the burden of acute diarrheal illness in the United States. FoodNet population survey data are useful in determining the prevalence and severity of self-reported diarrheal illness, common symptoms associated with diarrhea, the proportion of persons with diarrhea who seek care, and exposures that may be associated with foodborne illness.

Laboratory Survey

This spring FoodNet began the third cycle of the laboratory survey. The goal of this survey is to better understand stool culturing, handling, and processing methods. In addition to determining the routine practices of clinical laboratories, we would like to learn about the use of new technologies for testing stools and detecting pathogens. The survey will be conducted in all nine FoodNet sites.

Listeriosis Case-Control Study

FoodNet has just launched a case-control study of sporadic listeriosis. The study will run for 2 years and will collect information on dietary and medical risk factors for listeriosis, as well as laboratory information on *Listeria* isolates (e.g., serotype, antimicrobial resistance patterns, and other molecular characteristics). This important and timely study has taken much hard work to develop; its results are eagerly awaited by many.

Physicians' Survey

In the spring of 2000, eight FoodNet sites will administer a knowledge, attitudes, and practices survey to physicians who serve "at risk" populations. These physicians include obstetricians, infectious disease physicians, and oncologists. The primary

goals of the survey are to determine the current role of health professionals as food-safety educators and to identify possible barriers that may prevent health professionals from being food-safety educators.

We commend all the members of the study teams for their hard work and commitment to these projects!

Welcome to FoodNet:

We welcome Oshine Najarian, Kelly Giddens and Felicia Hardnett to the CDC FoodNet team. Oshine, a recent college graduate who has done freelance web design, is the FoodNet webmaster. Kelly, a recent college graduate and CDC employee for 3 years, has joined us as our new administrative assistant. Felicia worked in the CDC Office of Smoking and Health for a year and a half and joins us now as the new FoodNet statistician. We welcome Oshine, Kelly and Felicia and look forward to working with them!

The FoodNet team wishes Sudha Reddy, former FoodNet coordinator, the best of luck in her new position as an epidemiologist in New York City!

FoodNet News Welcomes Colorado as a New FoodNet Site

Colorado was recently awarded a grant from the Emerging Infections Program that will enable their participation in FoodNet. Five counties in Colorado (Denver, Adams, Arapahoe, Douglas, and Jefferson) will compose the FoodNet site. The population of the five counties is approximately 2 million, representing 48% of the state's population. Ellen Mangione, Colorado's FoodNet principal investigator, is Division Director of the Colorado Diseases Control and Environmental Epidemiology Division. She previously served as both an EIS Officer and Connecticut State Epidemiologist. Pamela Shillam, the Colorado FoodNet coordinator, has worked with the Colorado State Health Department for 20 years and currently manages the Communicable Disease Epidemiology Program. She also serves as the state specialist in foodborne (enteric) and waterborne diseases. Other members of the Colorado FoodNet team include John Pape and Ken Gershman in the epidemiology division and Jim Beebe and Mike Rau in the Public Health laboratory.

According to Pam Shillam, Colorado is "very enthusiastic to be participating in FoodNet activities." They are looking forward to contributing to national data that elucidates issues surrounding foodborne illness, being involved in original studies, and increasing their ability to detect and respond to clusters of enteric disease and foodborne illness in Colorado. We look forward to working with Colorado and welcome them!



Photo from left to right:
Jim Beebe, Ellen Mangione, Gerrit Bakker, Pam Shillam, John Pape, Ken Gershman

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Spotlight on New FSIS Epidemiologist:

Tamar Lasky has recently joined the Epidemiology Branch of the Epidemiology and Risk Assessment Division of the Food Safety and Inspection Service. Her research has concentrated in the areas of survey methodology, Guillain-Barré Syndrome, and vaccine safety. Dr. Lasky was most recently Assistant Professor and Director of the Computer Assisted Telephone Interviewing facility at the University of Maryland School of Medicine. She has co-authored two books, including the award winning book, *Investigating Disease Patterns: The Science of Epidemiology*, as well as research publications in medical, epidemiology and other research journals.

New FoodNet Website

Our new webmaster, Oshine Najarian, has worked with staff members to create a highly comprehensive and robust online presence for FoodNet. The revised website includes information about studies, surveillance, publications and more. Final reports, abstracts, survey instruments and the FoodNet News are now available online as well. Look us up at <http://www.cdc.gov/ncidod/dbmd/foodnet>.

Note to Readers: We're eager to spotlight other studies in future "**FoodNet News**" issues. Is there a project you'd like to know more about? Is there a new member of your FoodNet team that you would like to introduce? Please contact us!

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